

The Ohio State University

KFD 240-01 SMetolachlor + Metribuzin 3:1 vs Boundary and tank mix

Trial ID: 16 UPILL2
 Protocol ID: 16 UPILL2
 Project ID: KFD-06-US-OH-16-12TLE

Location: Western Branch Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director: Bryan Reeb
 Sponsor Contact: Tony Estes, UPI

General Trial Information

Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Latitude of LL Corner °: 39.86014 N
Longitude of LL Corner °: 83.67131 W
Altitude of LL Corner, Unit: 1088.00 FT

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Bryan Reeb

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: GLXMA Glycine max
Variety: SC3325LL
Description: Seed Consultants LL

BBCH Scale: BSOY
 Soybean

Planting Rate, Unit: 175000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Soil Temperature, Unit: 67 F
Soil Moisture: DRY dry
Seed Bed: MEDIUM medium

Planting Date: 5-25-2016
Planting Method: PLANTD planted
Planting Equipment: FE Field Equipment
Emergence Date: 6-1-2016

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Pest 3 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 4 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Pest 5 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

Pest 6 Type: W **Code:** HIBTR *Hibiscus trionum*
Common Name: Venice mallow

Pest 7 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Pest 8 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT² **Treatments:** 10
Replications: 3

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: F-8 Middle
% OM: 2 **Texture:** CL clay loam
pH: 7 **Soil Name:** Celina
CEC: 11.5 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

	A	B
Application Date:	5-25-2016	6-20-2016
Appl. Start Time:	10:30 AM	10:00 AM
Appl. Stop Time:	10:45 AM	10:15 AM
Interval to Prev. Appl., Unit:		26 DAYS
Application Method:	SPRAY	Spray
Application Timing:	PRE	EPO 1-3" WDS
Application Placement:	BROSOL	BROFOL
Applied By:	LAMB	BOLTE
Air Temperature, Unit:	79 F	81 F
% Relative Humidity:	47	68
Wind Velocity, Unit:	9 MPH	6 MPH
Wind Direction:	SSW	WSW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	66 F	73 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	75	66
Next Moisture Occurred On:	5-29-2016	6-23-2016
Time to Next Moisture, Unit:	4 D	3 DAYS

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH
Stage Majority, Percent:		12 100
Stage Minimum, Percent:		V3
Height, Unit:		6 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		13 100
Height, Unit:		6 IN
Height Minimum, Maximum:		5 7
Density, Unit:		40 m2
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		15 100
Height, Unit:		5 IN
Height Minimum, Maximum:		3 5
Density, Unit:		70 m2
Pest 3 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		19 100
Height, Unit:		10 IN
Height Minimum, Maximum:		6 10
Density, Unit:		3.5 m2
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		16 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 2
Density, Unit:		8 m2
Pest 5 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		14 100
Height, Unit:		3 IN
Height Minimum, Maximum:		1 3
Density, Unit:		15 m2
Pest 6 Code, Type, Scale:	HIBTR W	HIBTR W
Stage Majority, Percent:		13 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:		1 m2
Pest 7 Code, Type, Scale:	SIDSP W	SIDSP W
Stage Majority, Percent:		13 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 2
Density, Unit:		5 m2
Pest 8 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 2
Density, Unit:		1 m2

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Application Equipment

	A	B
Appl. Equipment:	6' BACKPACK	6' BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	44 PSI	44 PSI
Nozzle Type:	AIXR	AIXR
Nozzle Size:	11015	11015
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	4	4
Boom Length, Unit:	6.67 FT	6.67 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	1 liters	1 liters
Propellant:	COMCO2	COMCO2

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	AMARE	CHEAL	ABUTH	ECHCG
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Chenopodium album	Abutilon theophrasti	Echinochloa crusgalli
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	Common lambsquarters	velvetleaf	Common barnyard
Rating Date	6-15-2016	6-15-2016	6-15-2016	6-15-2016	6-15-2016	6-15-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
SE Group No.	1	2	3	4	5	6
Days After First/Last Applic.	21 21	21 21	21 21	21 21	21 21	21 21
Trt-Eval Interval	23 DA-A	23 DA-A	23 DA-A	23 DA-A	23 DA-A	23 DA-A
Plant-Eval Interval	21 DP-1	21 DP-1	21 DP-1	21 DP-1	21 DP-1	21 DP-1
Days After Emergence	14 DE-1	14 DE-1	14 DE-1	14 DE-1	14 DE-1	14 DE-1

Trt	Treatment	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*
1	UTC				0.0 c	0.0 -	0.0 b	0.0 c	0.0 c	0.0 b
2	KFD 240-01	42 oz/a	A		97.7 ab	26.7 -	100.0 a	95.0 b	100.0 a	99.3 a
3	KFD 240-01	32 oz/a	A		99.3 ab	6.7 -	100.0 a	100.0 a	100.0 a	99.3 a
4	Boundary	32 oz/a	A		98.3 ab	26.7 -	100.0 a	100.0 a	100.0 a	100.0 a
5	Boundary	24 oz/a	A		97.0 b	33.3 -	100.0 a	95.0 b	100.0 a	98.3 a
6	Tricor	12 oz/a	A		100.0 a	20.0 -	100.0 a	100.0 a	100.0 a	98.3 a
	Dual II Magnum	18.6 oz/a	A							
7	Tricor	12 oz/a	A		100.0 a	16.7 -	100.0 a	98.3 a	100.0 a	100.0 a
	KFD 273-01	18.6 oz/a	A							
8	KFD 240-01	42 oz/a	A		100.0 a	16.7 -	100.0 a	99.3 a	100.0 a	100.0 a
	Interline	29 oz/a	B							
	N-pak ams	1.5 qt/a	B							
9	Boundary	32 oz/a	A		97.7 ab	33.3 -	100.0 a	98.7 a	99.3 b	99.3 a
	Interline	29 oz/a	B							
	N-pak ams	1.5 qt/a	B							
10	Interline	36 oz/a	B		0.0 c	0.0 -	0.0 b	0.0 c	0.0 c	0.0 b
	N-pak ams	1.5 qt/a	B							
	LSD P=.05				2.66	24.68	.	2.96	0.63	2.45
	Standard Deviation				1.55	14.39	0.00	1.72	0.37	1.43
	CV				1.96	79.94	0.0	2.19	0.46	1.8
	Bartlett's X2				1.695	6.204	0.0	5.411	0.0	3.689
	P(Bartlett's X2)				0.792	0.516	.	0.144	.	0.45
	Skewness				-1.5733*	0.5772	-1.5801*	-1.5664*	-1.5798*	-1.5759*
	Kurtosis				0.5168	-0.8942	0.5274	0.5054	0.527	0.5208
	Replicate F				1.539	7.100	0.000	3.105	1.000	1.090
	Replicate Prob(F)				0.2415	0.0053	1.0000	0.0694	0.3874	0.3573
	Treatment F				2165.147	2.261	0.000	1736.076	39934.337	2569.917
	Treatment Prob(F)				0.0001	0.0672	1.0000	0.0001	0.0001	0.0001

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Pest Code	SETFA	AMBTR	AMARE	CHEAL	ABUTH	ECHCG			
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Chenopodium album	Abutilon theophrasti	Echinochloa crusgalli			
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	Common lambsquarters	velvetleaf	Common barnyard			
Rating Date	7-19-2016	7-19-2016	7-19-2016	7-19-2016	7-19-2016	7-19-2016			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
SE Group No.	14	15	16	17	18	19			
Days After First/Last Applic.	55 29	55 29	55 29	55 29	55 29	55 29			
Trt-Eval Interval									
Plant-Eval Interval	55 DP-1	55 DP-1	55 DP-1	55 DP-1	55 DP-1	55 DP-1			
Days After Emergence	48 DE-1	48 DE-1	48 DE-1	48 DE-1	48 DE-1	48 DE-1			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	13*	14*	15*	16*	17*	18*
1 UTC									
2 KFD 240-01	42 oz/a		A						
3 KFD 240-01	32 oz/a		A						
4 Boundary	32 oz/a		A						
5 Boundary	24 oz/a		A						
6 Tricor	12 oz/a		A						
Dual II Magnum	18.6 oz/a		A						
7 Tricor	12 oz/a		A						
KFD 273-01	18.6 oz/a		A						
8 KFD 240-01	42 oz/a		A	100.0 a	90.0 -	100.0 a	98.3 -	100.0 -	99.3 a
Interline	29 oz/a		B						
N-pak ams	1.5 qt/a		B						
9 Boundary	32 oz/a		A	99.3 a	88.3 -	100.0 a	100.0 -	100.0 -	96.7 a
Interline	29 oz/a		B						
N-pak ams	1.5 qt/a		B						
10 Interline	36 oz/a		B	90.0 b	98.3 -	86.7 b	78.3 -	100.0 -	60.0 b
N-pak ams	1.5 qt/a		B						
LSD P=.05		1.51			12.81		21.04		20.61
Standard Deviation		0.67			5.65		9.28	0.00	9.09
CV		0.69			6.13		10.06	0.0	10.65
Bartlett's X2		0.0			4.091	0.0	3.729	0.0	8.896
P(Bartlett's X2)		.			0.129	.	0.053	.	0.012*
Skewness		-0.7962			-0.3573	-1.5007*	-1.5073*	.	-1.4609*
Kurtosis		-1.7386			-0.8039	1.4674	0.5192	.	1.5493
Replicate F		1.000			1.652	1.000	0.516	0.000	2.048
Replicate Prob(F)		0.4444			0.2999	0.4444	0.6318	1.0000	0.2441
Treatment F		211.000			2.696	16.000	5.065	0.000	17.532
Treatment Prob(F)		0.0001			0.1814	0.0123	0.0801	1.0000	0.0105

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Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, = US
AMBTR, Ambrosia trifida, = US
AMARE, Amaranthus retroflexus, = US
CHEAL, Chenopodium album, = US
ABUTH, Abutilon theophrasti, = US
ECHCG, Echinochloa crus-galli, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

21 DP-1 = 1 GLXMA 5-25-2016
44 DP-1 = 1 GLXMA 5-25-2016
55 DP-1 = 1 GLXMA 5-25-2016